Savings and Investment in Indonesia

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Abstract

The main objective of this paper is to understand domestic savings and investment in Indonesia. The level of savings in Indonesia is relatively high by international standard. However, the savings through banking sector are more dominant than non-banking savings. This leads to the scarcity of long-term savings which are essential for long-term investment, especially in infrastructure, that ultimately benefit growth and development. One of the keys to promote long-term savings is through mandatory savings. At the same time, institutional investors such as insurance companies and pension funds must be encouraged to invest in long-term instruments. The role of financial sector plays a crucial role in providing such instruments. Therefore, policy recommendations must be directed to fiscal policy through tax incentives for stimulating long-term saving and investment; social welfare policy for encouraging contractual saving and developing long-term domestic institutional investors; financial market deregulation for increasing access to financial services and increasing competition among financial service providers; and coordination among sectors.

Key words: Savings, Investment, Financial sector, Indonesia

JEL: G20, E21, E22, H54

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1. Introduction

Indonesia is embarking on a new stage of its development, away from a heavy reliance on the commodity sector and toward a more balanced and equitable growth. Medium Term National Development Planning (RPJMN) of Indonesian Ministry of National Development Planning (Bappenas) projects that Indonesia average real annual gross domestic product (GDP) growth will be 7% over the next five years (Table 1). To achieve that, it is required a substantial investment increase from both Government and private sector. The capacity of the state budget, however, is limited. Therefore, private sector participation in this investment financing is very important. The role of financial sector here is crucial, in particular in terms of mobilization domestic savings and providing capital for productive investments.

TABLE 1. ECONOMIC GROWTH TARGET 2015-2019

	Medium Term Projection					
	2015	2016	2017	2018	2019	2015-2019
GDP Growth (%)	5,8	6,6	7,1	7,5	8,0	7 in Average
Investment Needs	3.945	4.500	5.188	5.978	6.947	26.558
a) Government	493	673	763	937	1.158	4.024
b) Private	3.452	3.827	4.425	5.041	5.789	22.534
-Bank Credit	752	894	1.078	1.323	1.646	5.693
-Foreign Loan	617	703	799	911	1.040	4.070
-Stocks Issuance	74	103	152	181	224	734
-Bond Issuance	443	606	705	803	925	3.482
-Internal Financing	1.566	1.521	1.691	1.823	1.954	8.555

Source: RPJMN 2015-2019

Given high investment financing needs, Indonesia should find the optimum way of pooling and mobilizing savings in order to promote sustainable economic growth. However, Indonesia still has issues on how to increase financial inclusion rate, to maximize utilization of financial products, and to improve the efficiency of financial intermediation. With the ultimate objectives of stimulating economic growth and greater distribution of wealth, economic restructuring needs to be able to mobilize domestic savings as alternative funding sources through capital market development, create more competitive banking system, and improve monetary policy. Generally, Government needs to formulate public policies in order to build a strong financial system with efficient financial intermediation to answer economic challenges. Particularly, considering the dominance of the banking sector in Indonesia as well as the issue of maturity mismatch between banks' short-term funding and long-term needs of infrastructure funds, Government needs to address the main issue of the scarcity of long-term savings from non-bank sources through financial markets.

This paper discusses domestic saving prospects, initiatives, and strategy, in particular on the role of financial intermediaries and markets in promoting sustainable growth and economic development. The objectives of this paper are twofold. Firstly, to show that long-term savings are essential for long-term investment, especially in infrastructure which will ultimately benefit growth and the development of economy. Secondly, to formulate policies to narrow saving and investment gap and to increase the efficiency of financial intermediaries and markets.

The structure of this paper is as follows. Section 2 reviews literature on the role of saving and investment on economic growth. Section 3 describes and analyzes the data on saving and investment in Indonesia and its peers. Sections 4 employs some quantitative analysis such as saving-investment correlation and panel time series as well as estimates the optimum saving-to-investment ratio required to achieve the Indonesia medium-term growth. Section 5 discusses saving and investment determinants. Section 6 proposes policy recommendations to address the issues and challenges. Finally Section 7 concludes the paper. The output of this paper is to construct macro framework along with the possible policy recommendations to improve the efficiency of financial sector.

2.   The role of Savings and Investment on Economic Growth

2.1. Growth Theory

Savings provide the resources for investing in physical capital, an important growth determinant. Either a standard economic growth neoclassical model by Solow (1956) or endogenous growth models argue that saving and investment matter for economic growth. A standard growth model postulates that at the steady-state condition, the dynamics of capital in term of per unit effective labor is determined by a constant fraction of output or income that is saved and invested. The model argues that a change in the saving rate, and thus a change in capital accumulation, and a change in the number of workers will only have a level effect, not a growth effect of income or output. On the other hand, endogenous growth models argue that output can grow as long as there is a positive change in the capital stock. An increase in savings therefore will have a permanent growth effect through its positive effects on investment and capital accumulation (Barro *et al.* 1995). By assuming that only a fraction of saving will be invested and the rest will be evaporated as the cost for the process of financial intermediation, Pagano (1993) shows that financial development is a key determinant of economic growth through three channels: (1) the saving rate, (2) the level of knowledge or technology, and (3) the efficiency of financial intermediation. Some other endogenous growth models also explicitly include financial development, either the banking sector development or the stock market development, as one of the important factors explaining economic growth.

The forms of the relationship between economic growth and financial development however may be non-linear and non-monotonic, meaning that the positive impact of financial development is in line with the maturity stage of the financial markets (Deidda & Fattouh 2002). Recently, Sahay *et al.* (2015) show that the form of positive relationship between financial development and growth is a bell-shaped, suggesting at some point the costs of financial development outweigh its benefits. Financial development may promote risk-taking behavior that lead to a higher economic and financial volatility. In particular, when the depth of financial sector is increasing, it may lead to lead to a loss of efficiency in investment, in terms of the misallocation of capital and the weak corporate control.

2.2. Household Behaviour Models

The dynamic of savings and growth can also be explained by household behavior models, i.e. Modigliani's life-cycle hypothesis and the Friedman's permanent-income hypothesis. The former argues that individuals plan their consumption and saving behavior over their life-cycle. Economic growth increases the income of the youth relative to that of the elderly, therefore this leads to more savings. The latter, on the other hand, argues that individuals are forward looking and they know that growth leads to higher permanent income. They therefore will dissave against future income, and this leads to lower savings. Both

theories imply growth affects savings, not the other way around as implied by growth models. The standard models of saving highlights the importance of income and demographic structure for the propensity to save. The implication of saving affects growth or growth affects saving are different (Deaton 1999). If the former is the case, then the design of policy must be aimed at the effects of saving incentives (e.g. taxes and compulsory savings), the design of social security systems, and the role of financial intermediation. If the latter is the case, the policy must be aimed at investment or the efficiency of investment.

2.3. Empirical Evidence

The positive link between saving, investment, financial development and growth has been supported by many empirical studies as summarized in Levine (2005), Ang (2008a), and Arestis *et al.* (2015). For example, Jappelli and Pagano (1994) find that liquidity constraints on households strengthen the effect of growth on savings. Krieckhaus (2002) in particular shows that mobilizing saving for investment and the role of government in the mobilization process are key factors leading to economic growth. In case of India, Singh (2010) also shows that a positive effects of saving on income. Bond *et al.* (2010) also provides empirical evidence supporting a positive correlation between investment and a long-run growth rate. The positive impact of investment in infrastructure on long-run economic growth is also empirically supported by Canning and Pedroni (2008).

In terms of savings-investment correlation, Feldstein and Horioka (1980) find that domestic savings and domestic investment is closely related even in an economy that is open for international capital flows. Over the long-run, savings should be equal to investment, and therefore the level of domestic savings ultimately determines the level of investment. Attanasio *et al.* (2000) also show empirically that higher saving rate is positively correlated to investment rate, while investment rate and growth rate are interlinked. Lately, Di Iorio and Fachin (2014) provide evidence of a long-run saving–investment relationship in 18 OECD economies over the period 1970-2007.

Generally, Levine (2005) summarizes that positive contributions of financial markets and financial intermediaries to saving and investment decisions and growth can be explained through their functions in utilization of domestic saving, informational improvement, effective monitoring mechanisms of good corporate governance practices, risk-reduction mechanisms, facilitating exchange of financial instruments representing the ownership of capital, and, most importantly, providing capital and productive capital investments. Pooling savings are that link between finance and the real economy by collecting many small amount of saving and channeling them into large investment projects.

3. Stylized Facts on Savings and Investment in Indonesia

3.1. Saving and Investment Rate

The saving and investment rates for Indonesia and its peers over the period 2000-2015 are illustrated Figure 1 and Figure 2, respectively. Currently, Indonesia saving rate is relatively low compared to its ASEAN peers, while its investment rate is relatively high. Both rates, however, are relatively high by international standard.
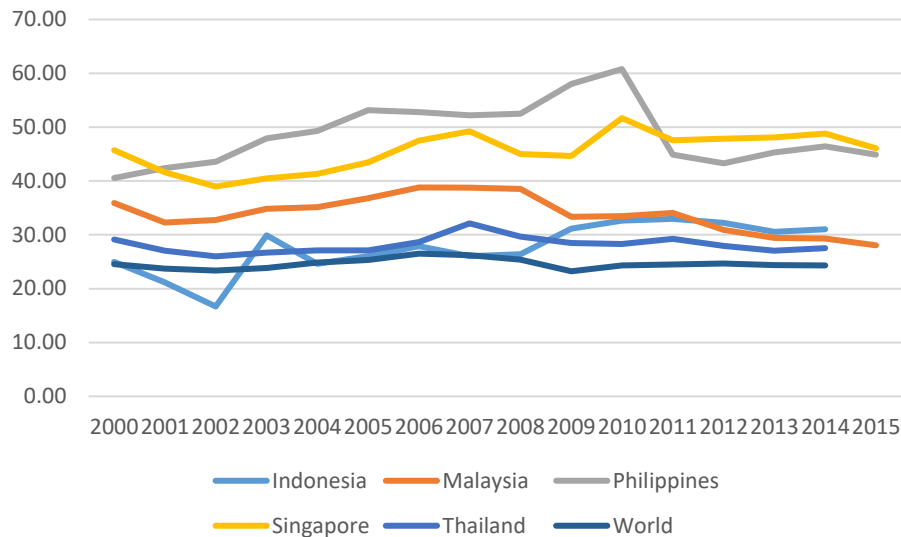
FIGURE 1. SAVING RATES (% GDP)
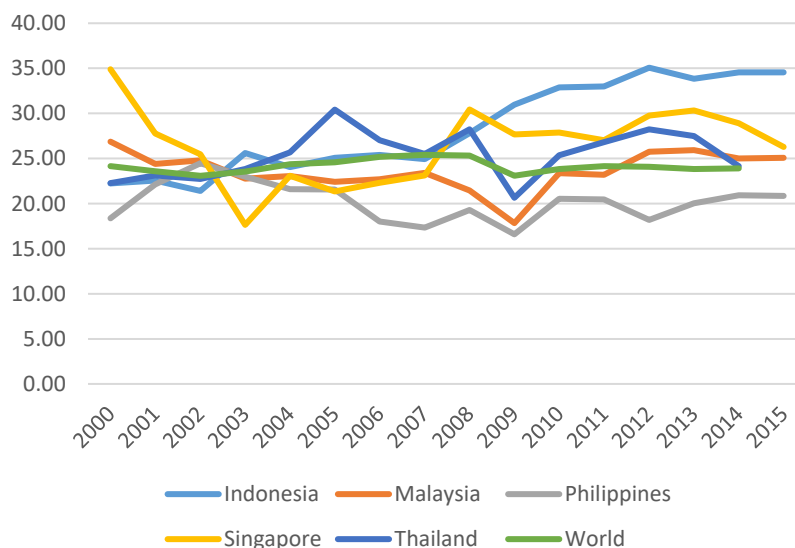*Source:* World Development Indicators

FIGURE 2. INVESTMENT RATES (% GDP)
Source: World Development Indicators

Figure 3 illustrated the average of saving and investment rates over the period 2000-2015. Over the period, the Indonesia average saving rate relative to GDP is 27.61%, which is relatively lower to its peers. Brunei Darussalam, the Philippines and Singapore are the economies with the highest saving rates in ASEAN of 50.58%, 48.62%, and 45.50%, respectively. Indonesia is about at the same level as Thailand (28.14%) and Vietnam (29.44%), but higher than Cambodia (14.67%) and Lao PDR (13.99%). The Indonesia saving rate is relatively higher than the rest of the world (24.61%) and the high income economies (21.87%). In terms of investment rate, Indonesia is the second highest in ASEAN with 28.37% after Vietnam of 31.74%. The rates for Singapore, Thailand and Malaysia are 26.50%, 25.43%, and 23.63%, respectively. The Indonesia investment rate is also relatively higher than the world and other income groups but the upper middle income economies. The average investment rate of the world is 24.14%, while that of upper middle income is 30.93%.
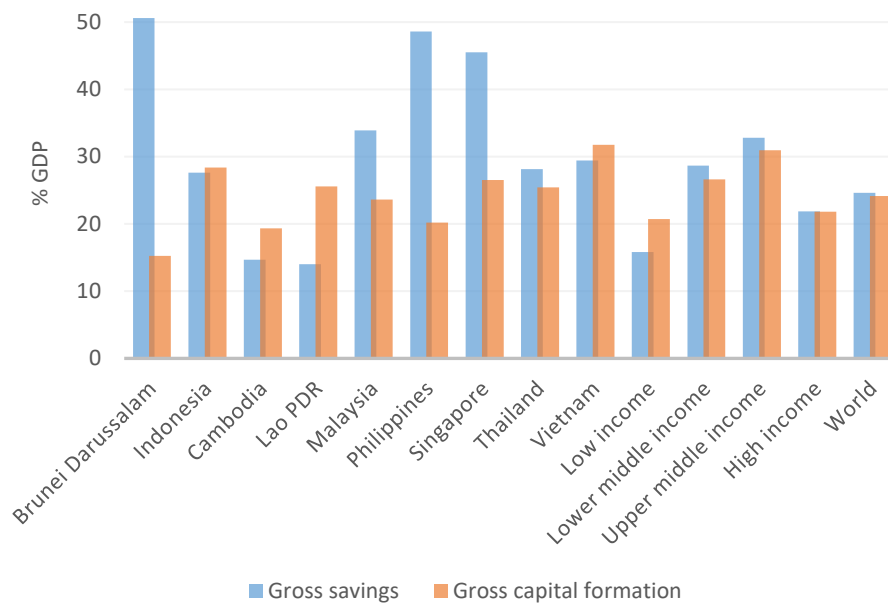
FIGURE 3. AVERAGE SAVING AND INVESTMENT RATES 2010-2015 (% GDP)
Source: World Development Indicators

This dynamic of saving rate over the period 2000-2015 is comparable to previous periods. Dayal-Gulati and Thimann (1997) compare and contrast Southeast Asian and Latin American economies over the period 1975-1995. They find that saving rates in Southeast Asia have been on an upward trend, while Latin America has been downward. Average saving rate in Southeast Asia in the mid-1970 was 15% and increased to 25% in 1995. The Indonesia private saving rate significantly increased from 9.8% of GDP over the period 1970-1975 to 23.9% over the period 1990-1995. Meanwhile, Grigoli *et al.* (2014) observe that the trend in world saving rates over the sample period 1981-2012 and conclude that it was stable at 19% until the late 1990s, increased to 22.6% in 2006, then decreased to 19.5% in 2012. In terms of saving composition, private saving dominates public saving at about four-fifths of national saving. The average private saving rate in advanced economies was 27.2% of gross private disposable income, which was 7% higher than the average 153 countries around the world sample. High-growth Asian economies, where Indonesia is included, saving rates have been increasing since the 1980s and reached 34.7% by the end of 2012. Since Indonesia has been recorded budget deficit over the period 2010-2015, its saving rate technically reflects private saving rate.

3.2. Savings through the Banking Sector

The trend of saving level is increasing over the period 2010-2016 (Figure 4). As of June 2016, the outstanding of private deposits in commercial banks is IDR 4,455 trillion, increased by 93% from the value of IDR 2,304 trillion in 2010. Of the different type of savings, the value of time deposits dominates with the biggest share of 45%, followed by saving deposit and demand deposit with the share of 33% and 22%, respectively. This composition has relatively remained the same since 2010. Table 2 however shows these private savings are mainly dominated by short-term saving.
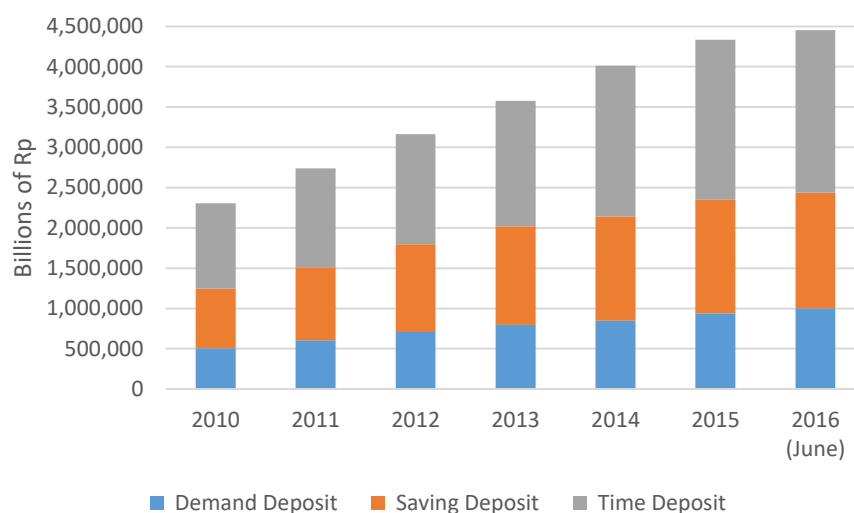
FIGURE 4. OUTSTANDING OF PRIVATE DEPOSITS OF COMMERCIAL BANKS
Source: *Indonesian Economic and Finance Statistics* of Bank of Indonesia

TABLE 2. COMPOSITION OF THIRD PARTY FUNDS OF COMMERCIAL BANKS

	Nominal (Billion Rp)	Proportion
Demand deposits	1.061.267	23.54%
Savings	1.346.058	29.86%
Time deposits		
1 month	1.051.797	23.33%
3 months	562.614	12.48%
6 months	253.592	5.63%
>= 12 months	233.030	5.17%
Total	4.508.452	100%

Source: *Indonesian Economic and Finance Statistics* of Bank of Indonesia (June 2016)

The allocation of savings is shown in Figure 5. Measured by working capital and investment loans from banks, the average allocation of saving into investment over the period 2010-2016 has been reached 71%. Working capital loans has been dominated by 48% share. The trend of working capital loans, however, is slightly decreasing. Their share in 2010 were 50% then decline to 46% in June 2016. Investment loans, on the other hand, have an increasing trend from the share of 19% in 2010 to 25% in 2016. Meanwhile, consumptions loans have a similar tendency as working capital loans in which they have declined from the share of 31% in 2010 to 28% in 2016.
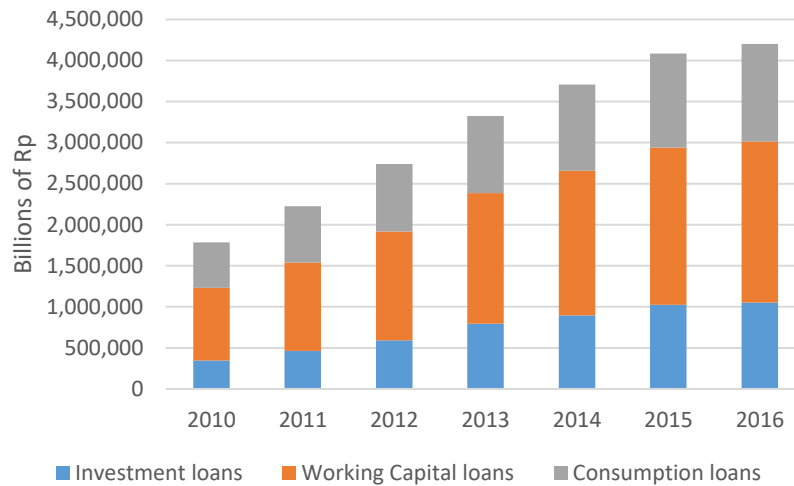
FIGURE 5. OUTSTANDING OF LOANS OF COMMERCIAL AND RURAL BANKS
Source: *Indonesian Economic and Finance Statistics* of Bank of Indonesia

Bank loans in the form of working capital credit and investment credit are still dominant sources of finance compared to other sources such as corporate bonds and equity issues (Figure 6). The 2010 outstanding loans allotted for working capital and investments was IDR 1,232.68 trillion. This figure is significantly higher than outstanding corporate bonds and capital raised with equity financing (IPOs and right issues) in the same period with reported values of IDR 115.35 trillion and IDR 73.46 trillion, respectively. The growth rates of financing from the banking sector and the bond market over the period 2010-2015 are noticeable. Both grew by 138% and 117%, respectively. Equity financing, unfortunately, is still lag behind. It has a negative growth of -27%. It is a quite interesting fact considering the cost of financing in the banking sector is relatively high. The average spread between lending rate and deposit rate over the period 2010-2015 is 5.18%, while the real interest rate is 6.42%. Factors contributed to these high interest rates are shallow financial markets, low interbank competition, and the substitution of Government bonds for time deposits (Bank 2016). The cost of equity issuing through an IPO, on the other hand, is about 4% of the total proceeds (Andriansyah & Messinis 2016).
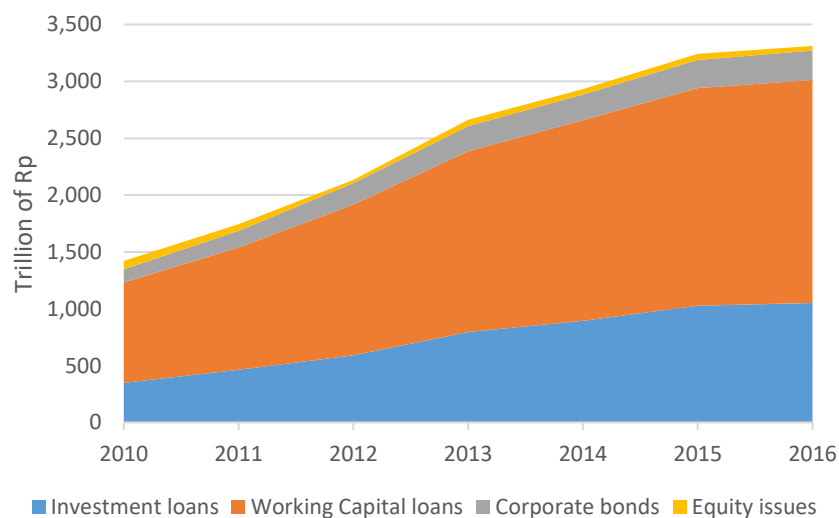

FIGURE 6. BANK LOANS, CORPORATE BONDS AND EQUITY FINANCING
Source: *Indonesian Economic and Finance Statistics* of BI and *Weekly Capital Market Statistics* of OJK

3.3. Savings through Direct Contractual Savings: the Securities Markets

The dominance of banking sector is also prevalent in terms of asset values (Figure 7). As at May 2016, banking assets are about 79% of the total asset value of Indonesian financial sector. Insurance and finance industries are the second and third largest sectors with asset values of IDR 852.32 trillion and IDR 425.04 trillion, respectively. Securities companies were still relatively low and only accounted for 1% of total assets.
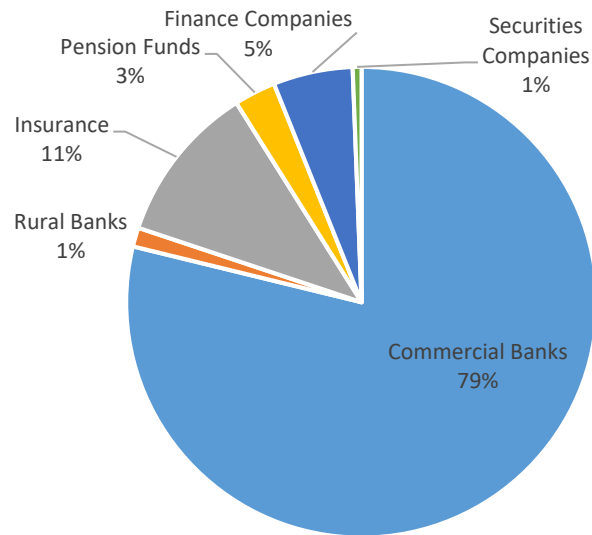

FIGURE 7. THE INDONESIAN FINANCIAL STRUCTURE
Source: Bank of Indonesia and OJK (all as of May 2016 except securities companies Dec 2015)

In terms of non-banking saving, equity is still the main instrument for investors to save their money. Based on the ownership data administrated by KSEI, total value of equity per June 2016 is IDR 1,045.15 trillion. Meanwhile, that of corporate bonds and Government bonds are IDR 249.34 trillion and IDR 42.34 trillion, respectively. Saving in mutual funds are amounted to IDR 2,42 trillion.

The ownership structure of those non-banking savings are represented in Figure 8. It is shown that 17% of equity is held by individual investors. Of institutional investors, corporations are the biggest share ownerships. Interestingly, the share of individual investors in Government bond ownership is quite significant, even higher than that of pension funds and insurance companies. Institutional investors, however, still dominate the ownership of corporate bonds and that of mutual funds.
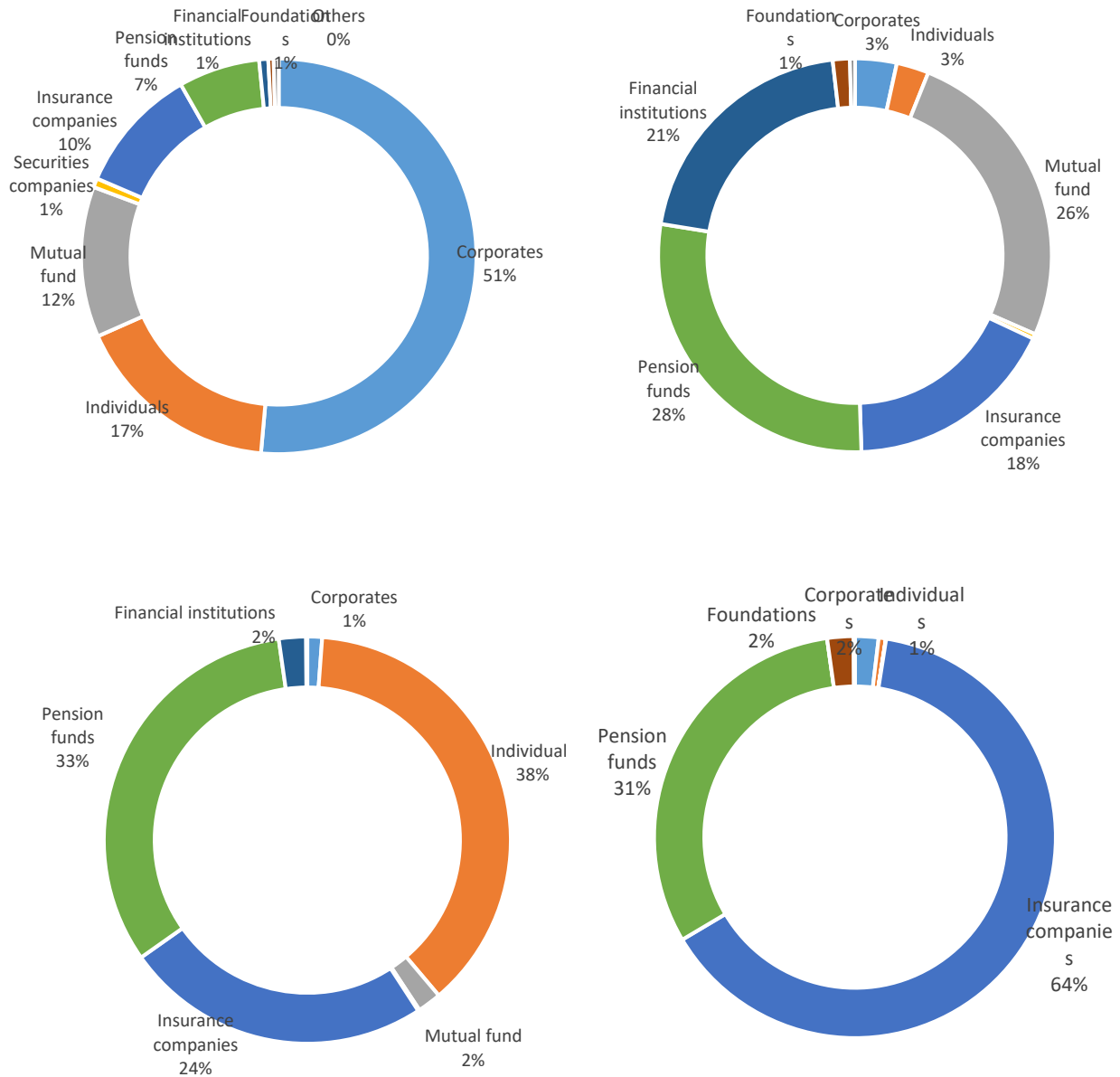
FIGURE 8. SECURITIES OWNERSHIPS

Equity Ownerships ((Total IDR 1,045.15 trillion) (left top). Corporate Bond Ownerships (Total IDR 249.34 trillion) (right top), Government Bonds Ownerships (Total IDR 42.74 trillion) (left bottom) and Mutual Funds Ownerships (Total IDR 2.42 trillion) (right bottom). Source: Weekly Capital Market Statistics of OJK (June 2016)

3.4. Savings through Non-banking Financial Institutions

Another non-banking savings are in the forms of insurance premiums and pension contributions (Figure 9). Saving in forms of paying insurance premium is relatively higher than that of paying pension contributions. As June 2016, the total insurance premium is IDR160.21 trillion, while the pension contribution is only IDR3.70 trillion. The trend of insurance premium has been upward in 2016, while pension contributions have relatively remained stable.
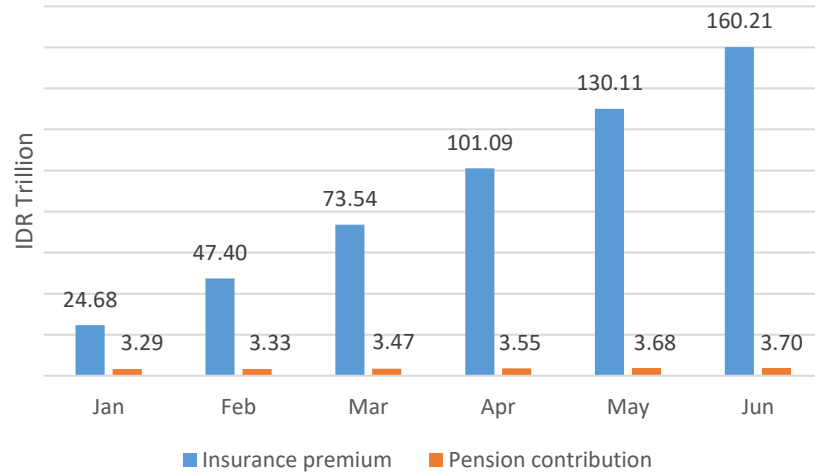
FIGURE 9. INSURANCE PREMIUM AND PENSION CONTRIBUTIONS 2016
Source: *Insurance and Pension Market Statistics* of OJK

In terms of assets, Indonesia is still lag behind other countries (Figure 10 and Figure 11). Indonesia's insurance company assets in 2014 was 7.66% of GDP, while its pension fund assets was 1.83% of GDP. Insurance companies in Singapore, Malaysia and Thailand have assets more than 15% of GDP. In terms of pension fund assets, Singapore and Malaysia are amongst the best countries with retirement systems.
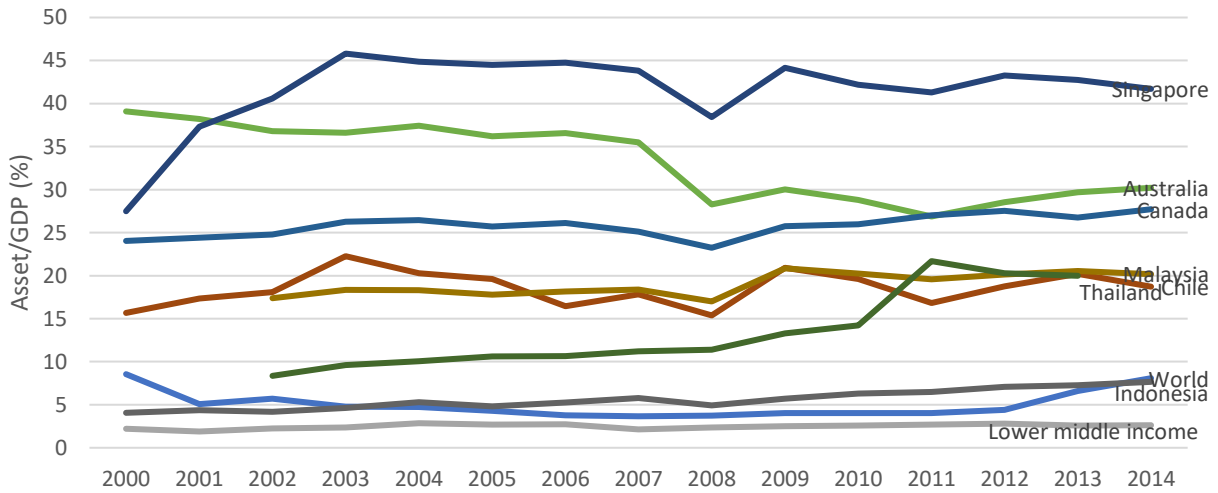

FIGURE 10. INSURANCE COMPANY ASSET TO GDP (%)
Source: *Global Financial Development Database, World Bank*
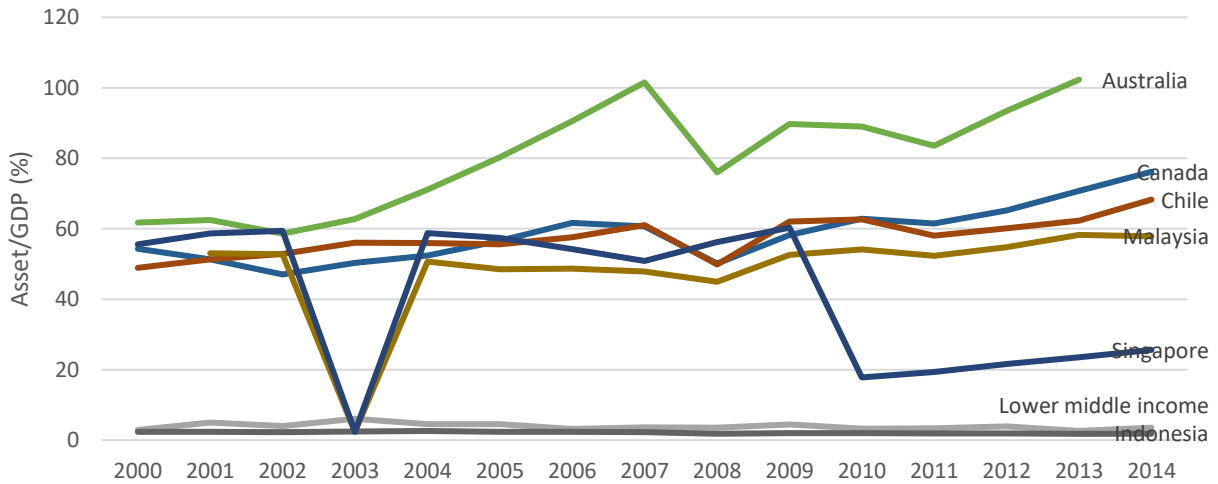
FIGURE 11. PENSION FUND ASSET TO GDP (%)
Source: *Global Financial Development Database, World Bank*

3.5. Long-term Savings and Long-term Investments

Long-term savings are essential for long-term investment, especially in infrastructure, and benefit ultimately growth and development. In terms of the allocation of investment, gross fixed investment is dominated by construction fixed investment as shown in Figure 12. This means that investment in other areas such as infrastructure investment is still not the main choice and lag behind.

FIGURE 12. INDONESIA'S CONSTRUCTION FIXED INVESTMENT
Source: Constain (2016)

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To conclude, the data on Indonesia saving and investment rate implies that Indonesia saving rate is relatively low compared to its ASEAN peers, while its investment rate is relatively high. Both rates, howe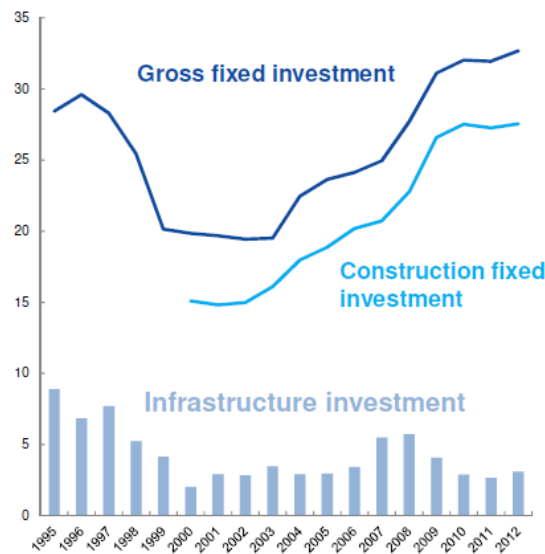ver, are relatively high by international standard. The trend of saving level is increasing, dominated by 1-month time deposits. The savings are mainly allocated to finance working capital investments. Bank loans are still dominant sources of finance compared to other sources such as corporate bonds and equity issues. The dominance of banking sector is also prevalent in terms of asset values. Non-banking savings are also relatively small, compared to banking savings.

4. Quantitative Analysis

4.1. Financial Development, Growth and Financial Stability: IMF

IMF develops Financial Development Index (FDI) taking into account the complex multidimensional nature of financial development. This index consists of two main sub-indices i.e. Financial Institutions Index (FII) and Financial Markets Index (FMI) in which each of them further measures depth, access and efficiency (Svirydzenka 2016). In terms of FDI, Indonesia is in the 63rd position of 183 countries. Indonesia's ranking is still below Singapore (16), Malaysia (21), Philippines (56) and Brunei Darussalam (59) (Svirydzenka 2016). Meanwhile, Indonesia's FII ranking of 94 and FMI ranking of 54.

As mentioned in Section 2 the relationship between economic growth and financial development may be a bell-shaped, suggesting at some point the costs of financial development outweigh its benefits. Fortunately, Indonesia still has much room to stimulate economic growth through the development of its financial sector. Sahay *et al.* (2015) show that with FDI value of 0.322, the effect of financial development on growth rate is about 4-5% with lower effect on growth volatility (Figure 13).
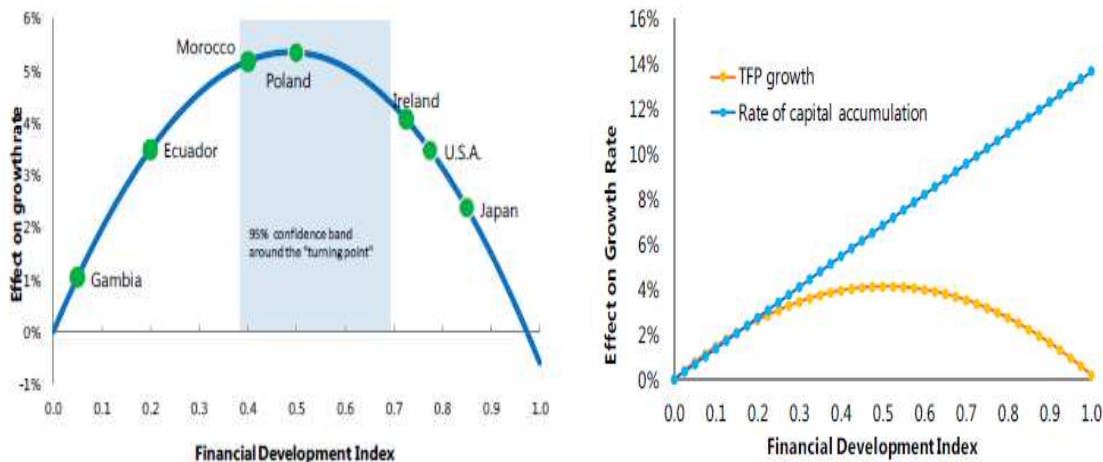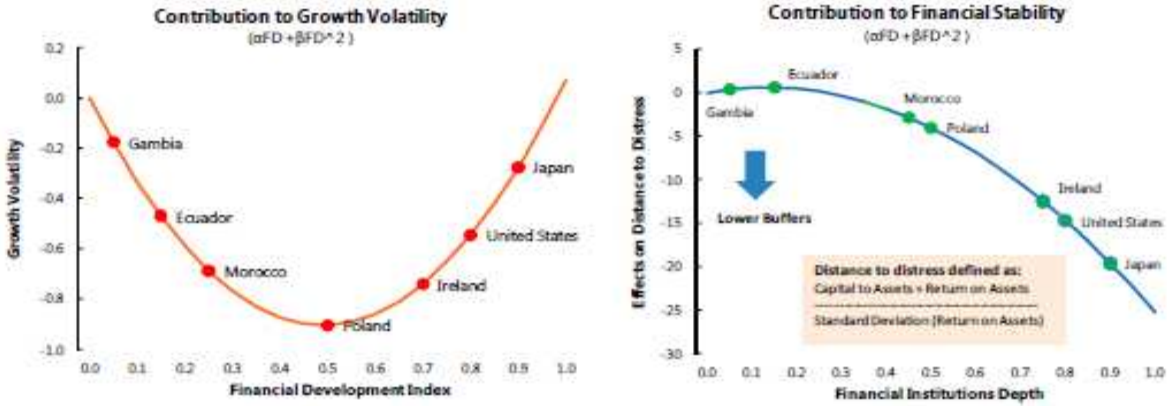
FIGURE 13. FINANCIAL DEVELOPMENT INDEX, GROWTH AND FINANCIAL STABILITY.
Source: Sahay *et al.* (2015)

4.2. Saving and Investment Correlations

Empirically, Figure 14 shows that the Indonesia's domestic savings and domestic investment is closely related. Pearson's analysis and cointegration regression using fully modified ordinary least squares (FMOLS) provide empirical evidence for that relationship between savings and investment either in short-run or long-run. This evidence is similar to the findings in other countries such as shown in Feldstein and Horioka (1980), Attanasio *et al.* (2000) and Di Iorio and Fachin (2014). This indicates that the level of domestic savings ultimately determines the level of investment.

$$\rho(S_t, I_t) = 0,74$$
$$\rho(S_{t-1}, I_t) = 0,49$$
$$\frac{I}{Y} = 5.22 + 0.87\frac{S}{Y}$$

FIGURE 14. SAVING-INVESTMENT CORRELATION.
Source: own calculation

4.3. Long-term Savings and Growth

This subsection will empirically examine if long-term savings have a long-term impact on growth. This study defines pension fund assets to GDP as a proxy for long-term savings. Nine countries as chosen as sample where 5 countries represent a group with good long-term savings (sub-sample 1) and the other 4 countries as a group with not so good long-term savings which Indonesia is included in this group (sub-sample 2).
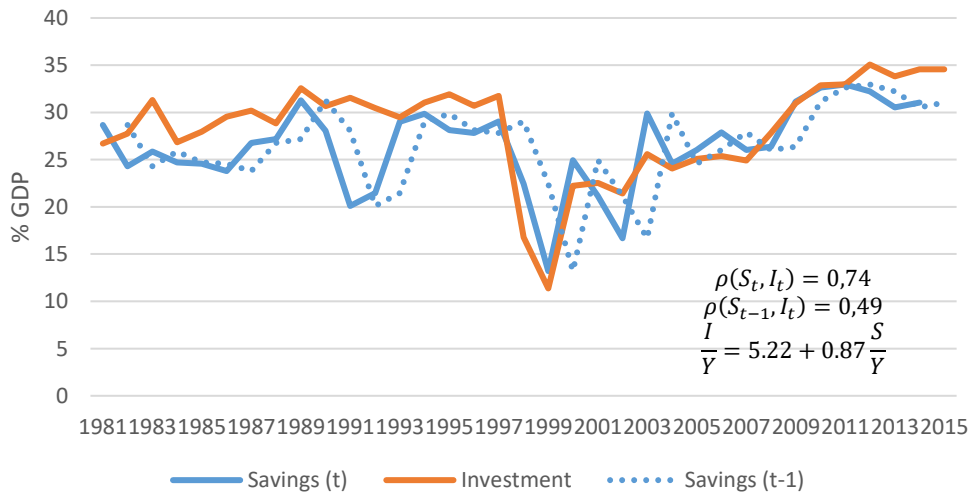
This study use choose 4 countries that are considered as those have at least grade C for their retirement systems i.e. Chile, Canada, Australia and Singapore based on Melbourne Mecer Global Pension Index (ACFS 2011). However, this study also includes Malaysia into the same group with the four countries because we believe its pension system also a good example to follow. The other groups are Indonesia, Philippines, Thailand, Vietnam and Mexico. Data covers the period of annual data 2000-2014. Panel Vector Analysis (Panel VAR) is employed to examine the relationship between two variables. The results of Panel VAR are shown in Table 3, Table 4 and Table 5 which empirically suggest that in the long-run, higher long-term savings lead to higher economic growth. In particular this is the case for countries with better long-term savings.

TABLE 3. FISHER-TYPE UNIT-ROOT TEST FOR GDP PER CAPITA GROWTH

Statistics	GDP per capita growth		
	Full sample	Sub-sample 1	Sub-sample 2
Inverse chi-squared	101.2741[***]	40.9472[***]	60.3270[***]
Inverse normal	-7.6244[***]	-4.6645[***]	-6.0572[***]
Inverse logit t	-9.3346[***]	-5.6834[***]	-7.5571[***]
Modified inv. chi-squared	13.8790[***]	8.2368[***]	11.2535[***]

Note: Based on augmented Dickey-Fuller tests. The null hypothesis is that all panels contain unit roots, while the alternative hypothesis is that at least one panel is stationary.

TABLE 4. FISHER-TYPE UNIT-ROOT TEST FOR PENSION FUND ASSETS TO GDP GROWTH

Statistics	Pension fund assets to GDP growth		
	Full sample	Sub-sample 1	Sub-sample 2
Inverse chi-squared	174.2426[***]	74.1384[***]	100.1041[***]
Inverse normal	-11.1038[***]	-6.9965[***]	-8.8334[***]
Inverse logit t	-16.1763[***]	-9.3024[***]	-14.1075[***]
Modified inv. chi-squared	26.0404[***]	14.3418[***]	23.0260[***]

Note: Based on augmented Dickey-Fuller tests. The null hypothesis is that all panels contain unit roots, while the alternative hypothesis is that at least one panel is stationary.

TABLE 5. PANEL VAR

	Full sample	Sub-sample 1	Sub-sample 2
Dep. Var: GDP per capita growth (t-1)			
Ind. Var:			
GDP per capita growth (t-1)	.3229597* (.1773562)	.4055433* (.2275564)	.1471797 (.2543619)
Pension fund assets growth (t-1)	4.699427* (2.729303)	4.549609* (4.549609)	7.86137 (5.885528)
Dep Var: Pension fund assets growth (t)			
Ind. Var:			
GDP per capita growth (t-1)	-.0054808 (.0109067)	.0037467 (.0152617)	-.0218957** (.0110763)
Pension fund assets growth (t-1)	-.140595 (.1053437)	-.0611548 (.1341471)	-.2893437 (.1967609)

4.4. Expected Saving-Investment Ratio

The new consensus of GDP growth projection for 2020 is 5.9-6.9%. The sectorial GDP model of the Ministry of Finance projects that to achieve that range, the growth of investment needed is 7.0-8.0% (Table 6). With the average saving-to-investment ratio over the period 2000-2015 of 0.97, the growth of saving needed is 6.8-7.8%. Therefore, the investment rate and the saving rate required to achieve the growth projection will be 35.42% and 34.36%, respectively.

TABLE 6. SECTORAL ECONOMIC GROWTH TARGET 2017-2020

Sector	2017	2018		2019		2020	
		Baseline	Optimistic	Baseline	Optimistic	Baseline	Optimistic
House Cons	5.1	5.1	5.2	5.1	5.2	5.0	5.1
LNPRT Cons	6.2	4.0	5.0	8.0	10.0	-2.0	1.0
Government Cons	5.4	5.5	5.5	7.0	8.0	4.0	6.0
Investment	6.4	6.5	7.0	6.7	7.5	7.0	8.0
Export	1.1	1.5	2.5	1.8	3.2	4.5	6.0
Import	2.2	2.5	3.5	2.8	4.0	3.1	4.3
GDP	5.3	5.4	6.0	5.6	6.4	5.9	6.9

Source: PKEM staff calculation

Indonesia level of production efficiency, measured by incremental capital output ratio (ICOR) is presented in Figure 15. ICOR is a ratio of the capital unit requires in order to produce extra one unit of output. Higher ICOR implies that higher need on capital to produce one more extra output, indicating production inefficiency. In other words, the lower the ICOR, the better output should be produced in the economy. Currently, Indonesian ICOR in 2015 was approximately 5.3, increased slightly compared to 2014, when the 2014 ICOR was around 5.1. Increasing in ICOR indicates that the economy become less efficient in transmitting the capital formation into the economy, or there is a higher need to accumulate capital than before. In the past, in the late 80s and early 90s, the Indonesian ICOR were relatively low at around 2.1. However, since the aftermath of the Asian Financial Crisis (AFC), the ICOR tend to be higher at around 4.4 in period 2000-2015.
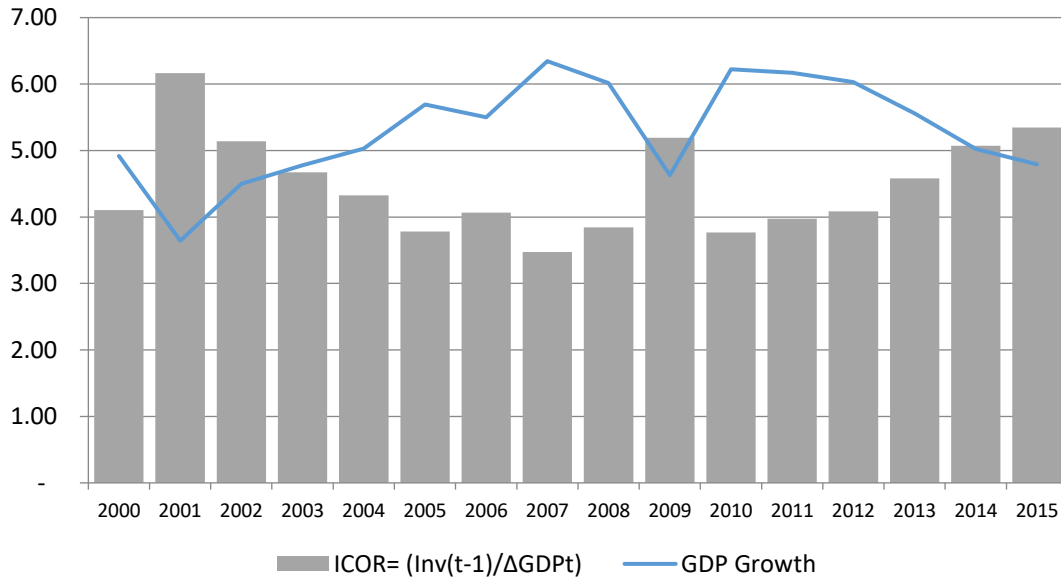
FIGURE 15. ICOR AND GDP GROWTH
Source: PKEM's staff calculation

BKF (2015) has measured the capacity of Indonesia financial sector in particular to calculate new credits that can be generated by banks and new bond issuances both by banks and pension funds. Based on some assumptions, new funding capacity through credits and bonds over the period 2015-2019 is IDR9.369 trillion, which is slightly above the RPJMN target of IDR9.175 trillion. New credits themselves are estimated to reach IDR8.101, 15 trillion, which is also higher than that of RPJMN of IDR5.693 trillion.

To make saving is allocated to productive investment, a depth and efficient financial intermediation is a required. Figure 16 compares Indonesia financial market depth to its ASEAN peers and the world. Either using private credit by deposit money banks or other financial institutions to GDP or stock market capitalization to GDP, Indonesia financial market is still not depth enough compared to Singapore, Malaysia, the Philippines, and Thailand. Indonesia financial market is also still not as efficient as their peers in terms of bank net interest margin and bank overhead costs to total assets (Figure 17). The high cost of funds in Indonesia is partly caused by two conditions: a lower rate of saving and a higher level of loan to deposit ratio. This over lending situation makes it difficult to intermediate deposits into credits without increasing cost of lending.
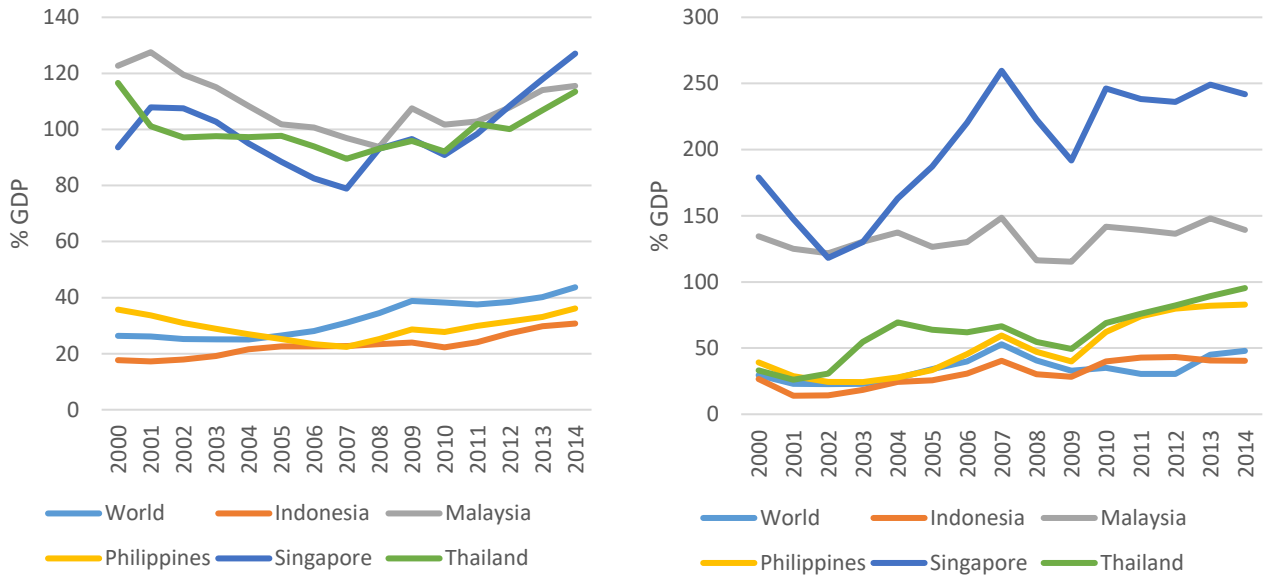
FIGURE 16. FINANCIAL DEPTH

Private credit by deposit money banks and other financial institutions to GDP (left) and sock market *capitalization to GDP (right). Source*: Global Financial Database, World Bank
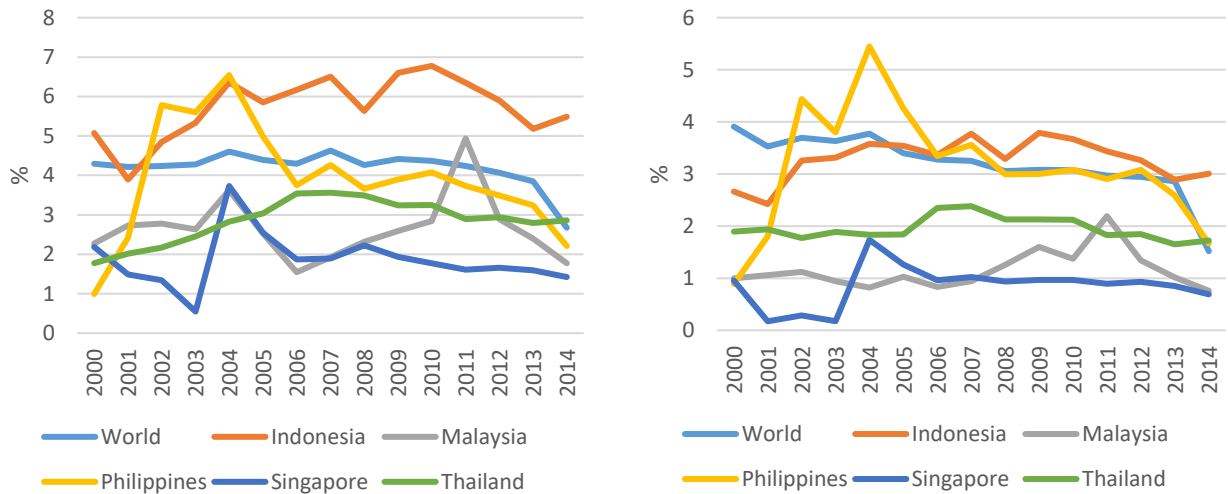

FIGURE 17. FINANCIAL EFFICIENCY

Bank net interest margin (left) and bank overhead costs to total assets (right). Source: Global Financial Database, World Bank

5. Saving and Investment Determinants

Understanding the determinants of saving and investment is crucial for policy makers in formulating strategies to strengthen the role of financial sector to promote strong and sustainable growth. Empirically, Grigoli *et al.* (2014) find that saving rates are determined by many factors such as macro environment, regulatory and legal framework as summarized in Table 7. For example, saving rates are positively associated with income and higher expected future growth, while negatively associated with financial liberalization, a higher old-age dependency ratio, and a higher share of young dependents. They also conclude that the effect of mandatory fully-funded pension system contributions on saving are more obvious than pay-as-you-go pension transfers to old and fully funded pension assets. In particular, Dayal-Gulati and Thimann (1997) show that fiscal policy, government saving, social security arrangements, financial market development and macroeconomic stability are key determinants for saving behaviors in Southeast Asia and Latin America. Tax structure and incentives, transfer and income redistribution are part of financial policies that play important role in affecting saving. While, compulsory saving schemes are also crucial. However, fully funded pension schemes with no withdrawals or a relative stringent withdrawal criteria before retirement as in Chile are more effective in affecting private saving rather than that in Malaysia and Singapore that allow the withdrawals. Singh (2010) suggests that to accelerate domestic saving to finance capital accumulation and foster higher income and growth, the existence of incentive-based measures to induce the motivation to save and the productivity-based measures to strengthen the capacity to save are crucial. This can be conducted by developing more efficient financial infrastructure, providing higher tax incentives on investment incomes, improving fiscal balance to increase public saving, providing tax benefits and investment subsidies for corporate investment.

In UK, interventions and policies aiming at increasing saving rate can classified into four themes (Crossley *et al.* 2012). Firstly, financial incentives through tax and benefit policy. For instance, tax incentive given for funds placed in private pensions rather than funds held in cash deposit accounts over long periods of time. Secondly, information, education and training, aiming at increasing the financial literacy level. Thirdly, choice architecture. This can be done by changing default rules for pension saving and providing retirement saving plans. The UK is set to require employers to default most employees into a private pension. A saving vehicle through retirement saving plans may be also a sensible approach. Lastly, social marketing to promote socially desirable saving behaviors. Meanwhile, Kerdrain *et al.* (2010) show that a number of structural reforms could potentially narrow the domestic saving and investment gap. The reforms influence saving rates by affecting the growth of income or the real rate of interest, including the precautionary saving behavior of household; while influence investment rate by affecting the cost of capital and the return on investment projects. The reforms are summarized in Table 8.

TABLE 7. DETERMINANTS OF PRIVATE SAVINGS

Variable category	Specific variable	Expected sign
Income	Income level: current	Ambiguous
	Income level: estimated temporary/permanent	+
	Gap of current to estimated potential income	+
	Income growth: current	Ambiguous
	Income growth: expected future	Ambiguous
Wealth	Total wealth	Ambiguous
	Net assets	Ambiguous
	Net foreign assets	Ambiguous
Rate of return on financial assets	Real interest rate	Ambiguous
	Real return on variable-income assets	Ambiguous
Relative prices	CPI current level	+
	CPI inflation: current	+
	CPI inflation: expected future	Ambiguous
	Term of trade: current	+
	Term of trade: estimated temporary/permanent	+
	Real exchange rate: level	Ambiguous
	Real exchange rate: expected future change	Ambiguous
Risk	Financial risk, instability, and crisis	+
	Macroeconomic instability and crisis	Ambiguous
	Political instability or risk	Ambiguous
	Violent conflict, war	Ambiguous
	Variance of innovations to saving determinants	+
Domestic borrowing constraints	Current credit flows, current money flows	-
Foreign borrowing constraints	Foreign lending	-
	Current account deficit	-
	Foreign saving	-
	Sovereign debt premium	+
	Capital flow restrictions	+
Financial depth	Bank credit stock	Ambiguous
	Financial assets	Ambiguous
	Broad money stock	Ambiguous
Demographic	Old-age dependency	-
	Young-age dependency	-
	Urbanization	Ambiguous
Poverty and distribution	Poverty	-
	Income concentration	Ambiguous
	Wealth concentration	Ambiguous
	Capital income share	+
Fiscal policy	Public sector saving	-
	Public sector budget balance	-
	Public consumption	Ambiguous
Government spending components	Education and health	Ambiguous
	Pensions	Ambiguous
	In-kind transfers	Ambiguous
Pension system	Pay-as-you-go pension transfer to old	Ambiguous
	Mandatory fully-funded pension system contribution	+
	Fully-funded pension assets	Ambiguous
Households and firms	Corporate savings effect on household saving	-

Note: + (-) means that the corresponding variable is positively (negatively) correlated to saving rate, whereas ambiguous means the relationship is not clear.

TABLE 8. STRUCTURAL REFORMS

Social welfare systems	Labor market policy	Product market deregulation	Financial market deregulation	Tax policy
developing social welfare systems in particular on health care	improving the sustainability of pension systems reducing the benefit replacement rate lowering of employment protection legislation (EPL)	removing competition-unfriendly product market regulation	raising the depth of financial markets relaxing borrowing constraints	Lowering tax burden on firms removing tax deduction of interest payments on mortgages in the absence of taxation of imputed rent;

6. Challenges and Possible Policy Recommendations

Suppose there is not enough saving to finance investment. There are ways to generate saving. We could increase foreign capital inflow to offset domestic saving. This should be in terms of foreign direct investment, or inflow of short-term portfolio investment that would be converted later into foreign direct investment. This should be supported by better investment climate and tax treatment, for example. One other important possibility is finding domestic sources to increase saving for investment financing. They are among others are: financial inclusion through the banking system; financial deepening in the capital market by increasing the number of domestic player in the equity market and creating a more liquid secondary market in the corporate and government bonds market; and channeling the non-bank financial industry fund i.e. pension fund to finance the infrastructure project.

Section 3 and Section 4 highlights some important challenges related to finance in Indonesia, or in developing countries generally. They are short-term, concentrated, limited range of products, expensive, and not pro-fixed assets investment. The problems may be the transmission of saving to investment which is not captured in the financial market, maturity mismatch that do not allow short term saving to be allocated to long term investment. It is required long-term saving, which is unfortunately, still on voluntary basis rather than mandatory one. Similar challenges in deepening financial sector in Indonesia have also been identified by BKF (2015) such as low saving rate, small contribution of banking sector, small contribution of non-bank financial institutions and limited long-term funding.

Comparing with other countries initiatives to increase saving rates highlighted in Section 5, in formulating government initiatives or policies to boost savings, especially long-term ones to promote higher and more sustainable growth, financial sector policies are an important key to shape the financial system that in turn influences the allocation of savings and the efficiently of

financial intermediation. Some policy directions have been highlighted by BKF (2015) to strengthen the role of financial sector, i.e. market deepening, institutional deepening, skill deepening and sector deepening. Strategies related to market deepening are by encouraging integrated and in-sequence financial market development and encouraging either retail or institution investors to place their assets in local currency long-term corporate bond market. Strategies related to institutional deepening are by encouraging specific inclusive financial program to increase financial service users, especially participation in BPJS employment pension scheme; increasing BPJS capacity in accumulating asset by managing liquidity risk; encouraging equal fiscal treatment between domestic institutional investors; and optimizing financing alternatives through non-traditional financing schemes. Meanwhile, skill deepening strategy are by directing LPDP to provide non-formal education scholarships such as Certified Financial Analyst (CFA) and Certified Risk Management (CRM). Lastly, sector deepening strategy can be done by conducting initiative at national level to increase financial market utilization in project bonds.

Strategies to accelerate financial deepening has also been offered by Ekberg *et al.* (2015). They offer 40 initiatives can be implemented in four stages in developing the Indonesian financial market. The initial step is aimed at establishing the foundation, followed by the second step of growing domestic market participation and improve infrastructure. The third step is to increase overseas participation and further strengthen infrastructure. The last step is to improve liquidity and risk management.

Having considered the determinants of saving and investment and other countries experience, initiatives to boost saving and investment must also be in line with those BKF's four deepening strategies and must be able to answer the challenges of short-term, concentrated, limited range of products, expensive, and not pro-fixed assets investment. Policy directions for saving in investment aims at increasing access to financial services, stimulating long-term saving, increasing competition among intermediaries and markets, and increasing efficiency of saving allocation to long-term investment (i.e. the quality of intermediation process). The framework of policy recommendation is as follows:
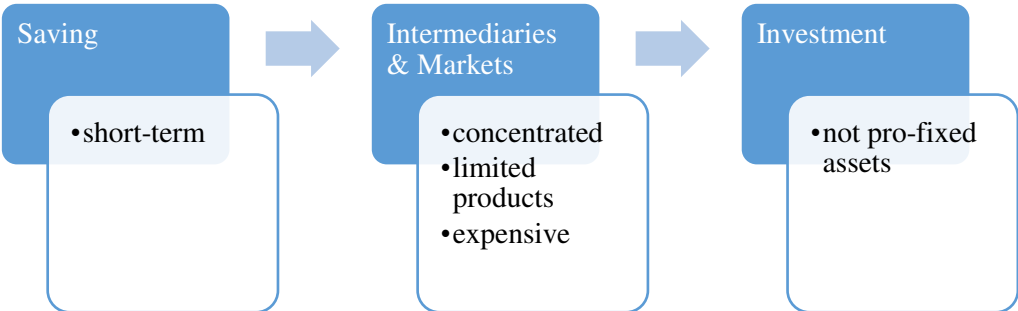
1. Fiscal policy through tax incentives for stimulating long-term saving and investment;
2. Social welfare policy for encouraging contractual saving and developing long-term domestic institutional investors;
3. Financial market deregulation for increasing access to financial services and increasing competition among financial service providers;
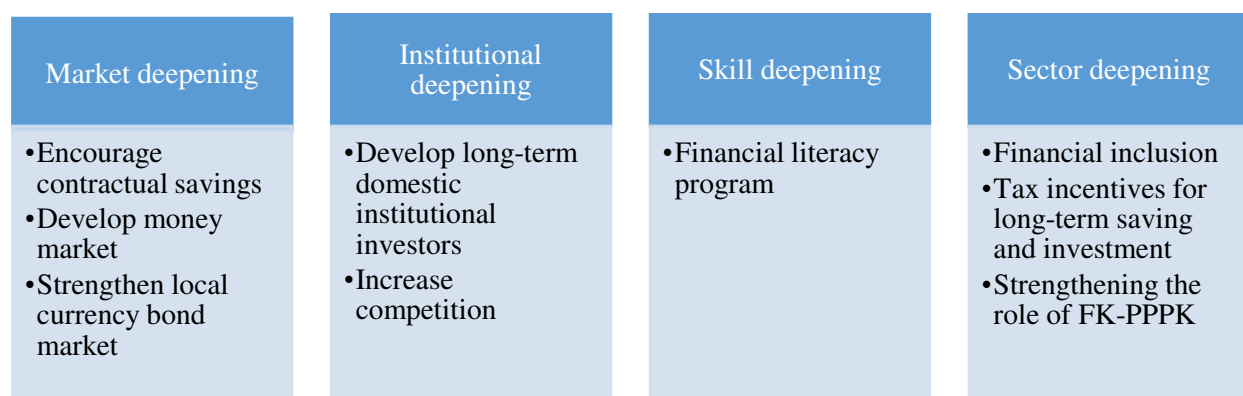4. Increasing coordination among sectors.

Market deepening	Institutional deepening	Skill deepening	Sector deepening
•Encourage contractual savings •Develop money market •Strengthen local currency bond market	•Develop long-term domestic institutional investors •Increase competition	•Financial literacy program	•Financial inclusion •Tax incentives for long-term saving and investment •Strengthening the role of FK-PPPK

FIGURE 18. FRAMEWORK TO INCREASE SAVING AND INVESTMENT

6.1. Fiscal Policy

The government can play an important role in increasing saving rate and investment rate. Some measures that have been taken by the government are as follow. Firstly, increasing minimum tax income tax level (*Pendapatan Tidak Kena Pajak* PTKP) to IDR 54 million from IDR 36 million per year in order to increase purchasing power and to stimulate consumption and growth. As a consequence, investment is expected to increase. Secondly, tax amnesty program that is mainly aimed at encouraging repatriation of Indonesian asset in overseas. It can be also seen as an effort to mobilize offshore saving into the national financial system. This repatriation fund may be used for financing public infrastructure as well as to lower cost of borrowing. Thirdly, cash transfer program to reduce poverty. Lastly, incentives for investment in special economic zones.

However, it is important to utilize saving for long-term investment therefore it is crucial that tax incentives are only selectively given for those that use the proceeds for fixed asset investment including infrastructure projects. This is important to address the issue of disconnection between financial markets and the real sector (Andriansyah & Messinis 2014). As indicated by Bencivenga *et al.* (1996), speculative trading boosts investors' reluctance to invest in a real sector investment project. Capitalists tend to invest their capital in financial markets, in particular the secondary markets. In this case, an increase in trading liquidity may lead to less long-term and productive investments because there will be less creation of new capital investments. Savings are only utilized for capital formation and accumulation, but not for capital allocation to productive

investments; therefore they may have no impact on the level of real activity. Singh (1997) also argues that the expected functions of trading and corporate controls from the secondary markets do not work efficiently. The primary markets themselves are not a preferred way to undertake investment in firm-specific human capital. Government incentives also need to avoid crowd-in private investment.

The investment policy of BPJS Kesehatan, BPJS Ketenagakerjaan, Taspen, and other long-term institutional investors must be re-oriented to their nature: long-term investments. Currently, their portfolio are still dominated by short-term assets. At the same time, the participants of insurance, pension, and old-age savings must be discouraged from early withdrawals. Tax policy must be formulated to create incentives to invest more and to keep the savings in the financial system.

6.2. Social Welfare Policy

Banking sector has been dominant in the Indonesian financial structure and it will still play the important role in medium term. The short-term saving and short-term investment are however a characteristic of banking sector, therefore we need initiatives beyond the banking sector that enable the creation of long-term saving .i.e. through insurance and pension funds. These contractual savings must be encouraged to overcome the current short-term saving problem. The government needs to revise the national social security program (*Sistem Jaminam Sosial Nasional*), especially the insurance program, the old age saving, and the pension programs. BPJS Kesehatan and BPJS Ketenagakerjaan are potential leaders for this initiative. Given their purpose to finance decent retirement and long-term liabilities, it would make sense for insurance and pension funds to embrace a long-term investment strategy. This initiative can be also seen as an effort on transitions of informal economy to formality.

As mentioned before, contractual savings empirically increase saving rates (Grigoli *et al.* (2014), Dayal-Gulati and Thimann (1997), Feng *et al.* (2009), and Singh (2010)). For instance, Feng *et al.* (2009) argue that pension reform for enterprise employees over the period 1995-1999 increases saving rate in China. They summarized the conditions before and after reforms as Table 9. Landerretche and Martinez (2013) stress out that the engagement in pension fund depends on financial literacy level. Interestingly, Ang (2008b) argue that the pension system scheme in Malaysia pushed by a direct government intervention have a negative impact on economic development. This mainly due to inefficiency in the public sector to accommodates a large amount of funds from the private sector. In contrast, Park and Lim (2004) find that liquidity constraints caused by the mandatory saving do not hamper growth in Singapore.

We, however, can learn from the three pension systems in Singapore, Malaysia and Chile, and the detail comparison among those systems can been seen in Appendix. To encourage saving for retirement, Singaporean government have established a mandatory saving scheme (a fully-funded social security system) in 1955. Both employee and employer make deposits to the saving account which legally belongs to the employee. Central Provident Fund (CPF) manages the deposits, while the Singaporean government determines the contribution rate for employees and employers called as CPF rates. Different age groups may have different CPF rate. Interestingly, the saving account, however, can be also used for medical cost, the purchase of house, education and insurance. Meanwhile, the Chilean pension system has been reformed since March 2008 by changing the pension system structure and requirements. The Chile government provides a pension safety net by guaranteeing a minimum pension level on retirement for member have contributed at least 20 years, approximately 50% of median monthly earnings. Malaysia has the Employees

Provident Fund (EPF) which is the national compulsory retirement savings scheme for private-sector. EPF is fully funded and provides defined contribution benefits to its members. Tolos *et al.* (2014) discusses the recent development of pension system in Malaysia which now also introduce the voluntary Private Retirement Scheme (PRS).

TABLE 9. PENSION REFORMS IN CHINA

	Pre-reform	Post-reform		
		New workers	Middle workers	Old workers
Benefits	75%-90% of wage before retirement	basic benefit (20% of regional average wage last year) + individual account benefit (accumulated value of individual acct divided by 120)	basic benefit (same as for new worker) + individual account benefit (same as for new worker) + transitional benefit	same as in pre-reform
Contribution rate	employers contributed a certain percentage of total wage, varying across regions, up to 3% no contribution from employees	contribution of employers: 20% of total wage contribution of employees: 4% payroll tax in 1997, increased gradually to 8% contribution to individual acct: 11%		no contribution from employees
Indexation of pension	real wage growth rate	real wage growth rate		

Pension reform as a way to encourage contractual saving is also crucial in developing long-term domestic institutional investors. Indonesia financial market needs capable domestic investors, in particular institutional investors, to increase financial inter linkage and reduce Indonesian exposure to currency risk and volatility risk of foreign capital flows. Related to the first initiative to encourage contractual saving, BPJS Kesehatan and BPJS Ketenagakerjaan are potential leading institutional investors for this initiative. Again, we can learn from pension reforms in Singapore, Malaysia, and Chile. Some recommendations are to impose higher contribution for pensions, to apply tax for early pension redemption, and to provide tax exempt to all institutional investors for their capital gain in bond investment.

6.3. Financial Market Deregulation

Increasing Access to Financial Services: Financial inclusion

A survey conducted by the World Bank finds that there are still 32% of the Indonesia households do not save, mostly because they have no money to save. Among the savers, 47% of them save at banks, 3% at other formal financial institutions, and 18% at informal institutions (Figure 15). Meanwhile, the demand for loans is also relatively fair large with 60% of the

population borrow money. However, loans from banks only cover 27% of it (figure 16). This is a financial inclusion issue where many people do not have a formal account at a financial institutions and access to affordable financial services.
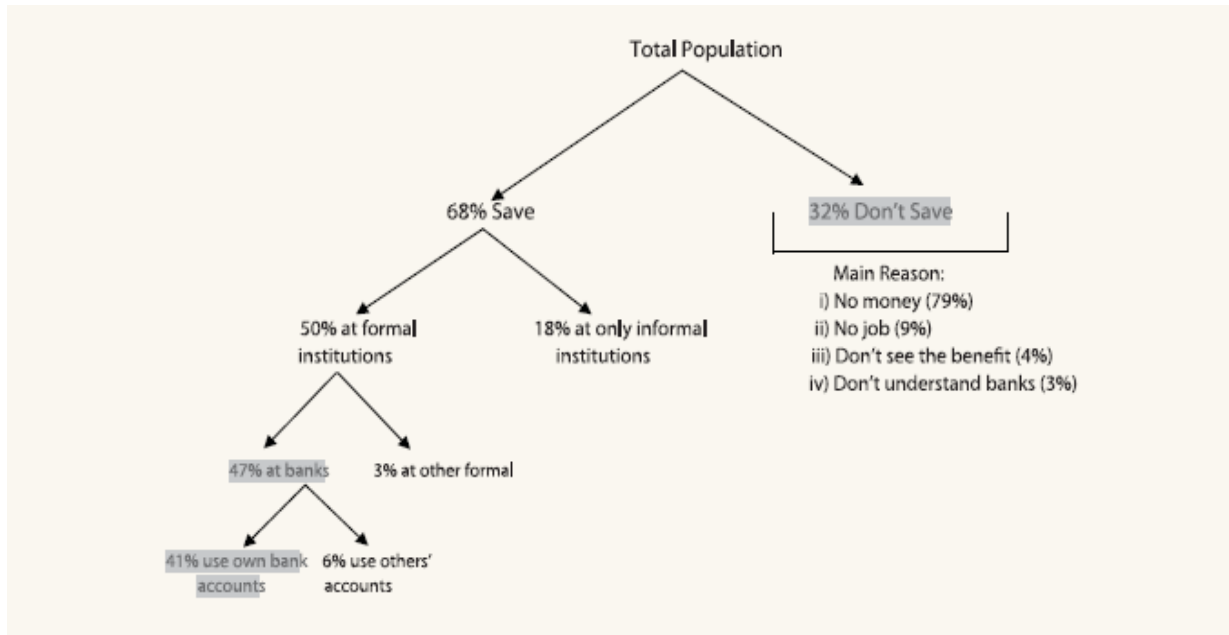

FIGURE 19. DEMAND FOR SAVING ACCOUNTS
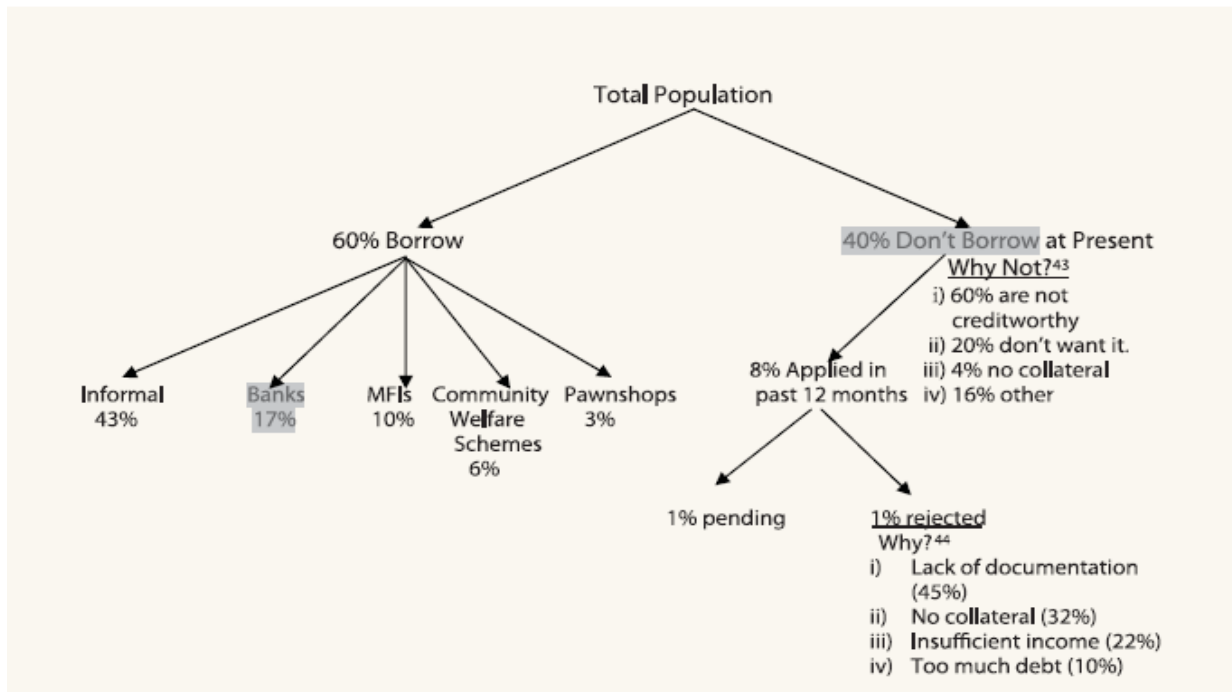*Source*: World Bank (2010)

FIGURE 20. DEMAND FOR LOANS
Source: World Bank (2010)

Basic saving and micro saving product may be encouraged. US has Bank Savings Incentive Programs with the objective to encourage consumers to start or increase savings through deposit accounts (OCC 2014). The programs is done via automatic deposits into savings accounts from paychecks or checking accounts. There are incentives offered by financial institutions for customers setting up automatic accounts. The forms of incentives among others are low or no cost financial products and services, basic financial education to participants, and entry to prize drawings. Financial institutions are also working with local governments and community-based organizations top promote these programs. The main target of these program are low- and moderate-income households. The savings accounts can be set for specific goals such as purchasing homes, creating small businesses, and furthering education. In Indonesia, we also have basic savings accounts *TabunganKu*, which is formal savings accounts with no periodic administration fees and low minimum balance requirements of about $2, to improve financial inclusion. Bank (2014) however still find some issues with this program such as low awareness, low profitability, low ownership, and poor usability.

Developing Money Market: The Importance of Sequencing.

The development of money market is perquisite for the development of financial markets. Karacadag *et al.* (2003) argue that reforms to develop domestic financial markets need a sequencing of market development to absorb both macroeconomic and financial risks. Financial institutions and regulators need to develop their risk management capacity according to the level of market development and sophistication. Sequencing therefore is needed to safeguard financial stability during financial market development. The sequence order is: (1) money market; (2) treasury bill and foreign exchange market (3) government bond market; (4) corporate bond and equity market; and (5) asset backed securities and derivatives market. The role of money market is in price discovery, and interest rate setting and transmission. Lending and borrowing capacity of financial instructions requires a liquid money market. One important instrument in money market is repurchase agreements (repos) because they can be used as indirect monetary control and liquidity management by central banks and facilitate interbank lending and borrowing. BKF (2015) propose to include SOE bonds with specified rating as eligible instruments for repo transaction with central bank. Another current issue with repos in Indonesia is the existence of double taxation. The development of local currency bond market is also required liquid money market and stable interest rates in order to enable investors invest in long-term bonds.

Strengthening Local Currency Bond Market

Well-functioning local currency bond market is crucial to mobilize or intermediate saving to investment in local currency. The reliance on foreign currency funding is risky for both its sovereign and corporates due to significant volatilities in international markets. Government however needs to encourage local investors to invest in Rupiah dominated corporate bonds. BKF (2015) highlight two strategies to strengthen local currency bond market. First, revising the current regulation for NBFI holding in government bonds to also include specified SOE bonds. Second, increasing participation in REIT and other non-traditional instruments in financial market. Third, enabling environment for hedging. Last, promoting facility or specific incentive for investor that is willing to invest in local currency bonds. Tax incentive in form of

Establishment of bond guarantee fund is also important to increase the attractiveness of local bond market. Danajamin in Malaysia may be a good example. Danajamin is a financial guarantee insurer (FGI) as credit enhancer for bonds and sukuks. It was established in May 2009 as

Malaysia's first Financial Guarantee Insurer under the Government's RM60 Billion stimulus package and governed under the Financial Services Act 2013. Danajamin is owned by Ministry of Finance (50%) and Credit Guarantee Corporation (50%). The latter is owned by the Central Bank of Malaysia, and function as a provider of credit enhancement for loans. Since 2009, Danajamin has guaranteed RM 8.8 billion consisting of RM4 billions for project/infrastructure and RM 4.8 billion for corporate and asset back securities. It has involves in active risk sharing with partner banks or investors. Danajamin has contributed to the Malaysia market development through (1) introduction of new issuers to the capital markets, (2) brought back bank guarantees to the capital markets, (3) new application of guarantees, either drop off guarantees (projects/infrastructure) or partial guarantees, and (4) promoting rating diversity. Danajamin provides guarantee for construction phase only.

It is allowed for Danajamin to provide guarantee more than its capital. Therefore, its risk management strategies are active tracking of financial/non-financial covenants such as sinking fund build-up requirement; regular site visits, Co-signatory arrangement for monetization, and exposure/risk sell down to potential investors/bankers. So far there is default or zero claims. Learning points from Danajamin is we need a conducive landscape for capital market with a strong Government leadership and support in terms of good regulatory framework, good legal framework, broad based investment community, established rating agencies and state owned enterprises. Key learning points are state owned financial guarantor structure (vs private), largely independent & non-executive board structure, managing private sector financial institutions (avoid crowding out), talent and market benchmarking, and nurturing culture of risk awareness. For Indonesia context, PT. Penjaminan Infrastruktur Indonesia (Infrastructure and Guarantee Fund Indonesia) can be mandated to be the guarantee agency.

Increasing Competitiveness in Financial Services

The transmission of saving to investment may be not captured in financial market and intermediary. It implies that there is a problem with an efficiency of resource allocation. An increase in financial service competitiveness is believed leading to a more efficient and innovative financial intermediary and market. Competition is also expected to exacerbate the moral hazard problem of financial institutions, especially banks with their nature of linkages between banks through inter-bank markets and payment systems. In general the benefits of competition are to increase efficiency, to provide better products with lower prices, to stimulate innovation, and to replace inefficient financial institutions with efficient ones.

Claessens (2009) proposes three approaches to increase the competition. Firstly, reducing regulatory barriers by removing unnecessarily anti-competitive regulation and make the entry process as easy and inexpensive as possible. Secondly, levelling the playing field across financial services providers and financial products through harmonization among financial services providers, markets and types of products. Thirdly, assuring that the institutional environment required for the production and distribution of financial services, such as network services, need to be available to all parties with fair and uniform priced.

Khan *et al.* (2012) identified three main factors that hindered investments in Indonesia: high cost of finance, low social returns on investment, and low appropriability of that return. Inefficiency in financial intermediation (measured by the wide spread between lending and borrowing rates) and low levels of domestic lending are the two main reasons for the high cost of finance (measured by the high level of lending rates). This high cost of finance is a bigger problem

than the low level of domestic savings. Khan *et al.* (2012) argue that the inefficiency is mainly due to alternative finance being more attractive, such as corporate bonds and equity financing.

6.4. Coordination

Strengthening the Role of FK-PPPK

Those initiatives must be done through an integrated national framework in order to make coordination across institutions work effectively and have strong influence to the effectiveness of financial sector development at the national level. Indonesia can learn from Malaysia with its *Malaysia Capital Market Task Force*, Russia with its *Moscow International Financial Centre Implementation Task Force*, and Thailand with its *Financial Sector Master Plan Committee*. *Forum Komunikasi Pembiayaan Pembangunan melalui Pasar Keuangan* (FK-PPPK), consisting Ministry of Finance, Bank of Indonesia and Financial Service Authority, can be a starting point. Established in April 2016, FK-PPPK can formulate comprehensive national strategies to develop and deepen Indonesian financial market in order to support the national development. A depth, active, liquid, inclusive and efficient is a perquisite to increase the financial resources availability and this can be achieved through financial market mechanism, effective fiscal and monetary policy implementation as well as the availability risk management.

Setting Up National Financial Literacy Program

All above initiatives must be accompanied by a national-wide financial literacy program, in particular on insurance and pension literacy. The programs provoke more people entering longer term insurance contracts or saving for monthly pension payments at retirement.

7.   Conclusions

This paper discusses the role of saving, financial intermediation, and investment in promoting sustainable growth and economic development. Indonesia savings rate is relatively low compared to its peers, while its investment rate is relatively high. Both rates, however, are relatively high by international standard. Banking sector. Bank loans are still dominant sources of finance compared to other sources such as corporate bonds and equity issues. The dominance of banking sector is also prevalent in terms of asset values. Non-banking savings are also relatively small, compared to banking savings.

This leads to the scarcity of long-term savings which are essential for long-term investment, especially in infrastructure, that ultimately benefit growth and development. One of the keys to promote long-term savings is through mandatory savings. At the same time, institutional investors such as insurance companies and pension funds must be encouraged to invest in long-term instruments. The role of financial sector plays a crucial role in providing such instruments.

 Policy recommendations must be directed to fiscal policy through tax incentives for stimulating long-term saving and investment; social welfare policy for encouraging contractual saving and developing long-term domestic institutional investors; financial market deregulation for increasing access to financial services and increasing competition among financial service providers; and coordination among sectors. Recommendations suggested here are encouraging contractual savings, developing money market, strengthening local currency bond market, setting up a national financial literacy program, giving tax incentives for long-term saving and investment, and strengthening the role of FK-PPPK.

Appendix

Pension System in Malaysia and Singapore

	Malaysia	Singapore
Pension system	Employee Provident Fund	the Central Provident Fund
Scheme	Compulsory saving scheme	Compulsory saving scheme
Law	Employees Provident Fund Act 1991	A fully funded basis
Contribution	23% of the employees' total wage: • the employee: 11% • the employer: 12%, (but can voluntarily pay a higher rate) Contributions are required until the age of 75, but at starting at the age of 55 the employer's share is reduced to 6% and the employee's to 5.5%;	Varies, depending on the employee age structure. 34.5% of the employee total wages: • the employee: 20% • the employer: 14.5% From the age of 50, contribution rates decrease to encourage the employment of older people.
Basic saving	A certain minimum sum amount, according to their age (e.g. minimum MYR 120,000 by the age of 55)	The minimum sum amount to SGD 120,000 from the age of 55 onwards in Retirement Account, taken from the Special and/or Ordinary Account balances.
Withdrawal options	Monthly payments, a one-time lump sum withdrawal, or withdraw part of savings at any time.	
Other purposes than retirement financing	• Account I: 70% of monthly contributions, for financing retirement • Account II: 30% of monthly contributions, for finance housing, education and medical expenses the others	• Ordinary Account: for buy residential and non-residential property, approved assets and insurance funds, and cover education costs. • Special Account: for old age, contingency purposes and investment in retirement-related financial products. • Medisave Account: for hospitalization and medical care expenses and to pay for approved medical insurance premiums.
Tax	The employees' contributions is tax deductible up to MYR 5,000. Withdrawals from the different accounts are exempt from income tax;	Tax-exempt for both the employer's and employee's contributions as well as pre-retirement and retirement withdrawals.
Investment policy	At least 70% in low-risk fixed income instruments with the portion invested in domestic equity not exceeding 25%. Overseas investments need to be approved by the Ministry of Finance.	CPF is responsible for the custody of funds and for administering the program, but the Singapore Government Investment Corporation is responsible for investing the scheme's assets. The vast majority of capital in Ordinary and Special Accounts is held in CPF guaranteed accounts in non-marketable government floating rate bonds, issued primarily to the CPF. Assets outside the guaranteed accounts are invested through the CPF Investment Scheme. For ordinary account, a limit of 35% applies to the following asset classes: shares, property funds or real estate investment funds, corporate bonds. An additional 10% applies to gold, gold ETFs and other gold products. All investments must be made in Singapore Dollars.
Supplementary pension provision	Employers may either top-up their EPF contributions or set up a self-administered trust fund To provide complementary retirement benefits.	The Supplementary Retirement Scheme, a voluntary private pension scheme without employer involvement that enjoys tax advantages,

Singapore and Malaysia http://www.pensionfundsonline.co.uk/content/country-profiles

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